

# Germinating Ideas

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## CSD AGM

CSD conducted its Annual General Meeting on Tuesday, May 21. The meeting was attended by some 70 members with many more members voting by proxy. There was considerable interest in the three directors' positions that were put to the member vote. Two directors, Hugh Holland and Ralph Schulze were re-elected to the Board. Paul McVeigh — a cotton grower from the Darling Downs — was also elected.

## FUSCOM and fusarium resistance rankings

The Australian Cotton CRC sponsors and coordinates Fusarium wilt research and extension via the Fusarium Wilt Research and Extension Coordinating Committee (FUSCOM), which emerged from the original Fusarium wilt committee established by the ACGRA. FUSCOM's objectives include the facilitation of better communication and collaboration between the various groups involved by organising annual workshops and field visits as needed.

The committee has included representation from growers (Evan Cleland), extension (Greg Salmond), molecular biologists (Helen McFadden), the CRDC (Sonia Tingay/Bruce Pyke) and Deltapine (Neil Forrester/Richard Leske) as well as Pathologists from QDPI (Joe Kochman/Linda Swan), NSW Agriculture (David Nehl) and CSD (Stephen Allen). Stephen Allen chairs the group in his role as a Program Leader on the Management Committee of the CRC. The CRC Research Liaison officer, Nicky Schick, assists FUSCOM in the performance of its functions.

An outcome from the FUSCOM 2000 Fusarium workshop was the challenge from growers to establish a more quantitative system for ranking cotton varieties for resistance to Fusarium and



CSD senior plant pathologist Stephen Allen conducting stem cuts to assess varietal resistance ratings for Fusarium wilt.



The CSIRO cotton plant breeding team. From left: Warwick Stiller, Greg Constable, Norm Thomsom (retired) and Peter Reid.



Verticillium wilt. After considerable discussion and input from all involved a system has been developed and is now in place. The more trials contributing to the overall ranking of a variety, the more confidence a grower can have in the ranking proposed. Growers should look at individual trial results rather than just check the average ranking.

FUSCOM recognises that there is still room for improvement but more data is required over the next couple of seasons to allow further refinement of the protocol if necessary.

### A standard for describing cotton cultivar resistance to Fusarium wilt

The resistance of a cultivar is expressed relative to the resistance of a standard (rated as 100). Sicot 189 is the standard for CSIRO cultivars and is included in all evaluations. The number of comparisons (experiments/cultivar trials) is also specified in the description of resistance.

For example, Sicot 80 has a Fusarium resistance rating (FRR) of 118(8). This means that the results of eight comparisons have indicated that Sicot 80 is 18 per cent more resistant than Sicot 189. Comparisons can only be included in calculating the resistance ranking if disease pressure was significant (maximum survival of 70 per cent) in the standard cultivar, Sicot 189.

### A standard for describing cotton cultivar resistance to Verticillium wilt

The resistance of a new cultivar is expressed relative to the resistance of a standard (rated as 100). Sicala V-2 is the standard for CSIRO cultivars in all evaluations. The number of comparisons will be specified in the description of resistance. For example, Sicala 40 has a Verticillium resistance rating (VRR) of 91(3). This means that the results of three comparisons have indicated that Sicala 40 is nine per cent less resistant than Sicala V-2.

### Fusarium and Verticillium resistance rankings for CSIRO cotton varieties

Disease resistance rankings for CSIRO varieties are available on the CSD internet site [www.csd](http://www.csd).



From left: Retiring directors Alan Brimblecombe and Frank Hadley at the launch of seven new CSD varieties.

**TABLE 1: Fusarium resistance rankings for CSIRO varieties**

CONVENTIONAL		TRANSGENIC	
Sicot 80	118 (8)	Sicot 289RRi	110 (3)
Sicot 71	110 (9)	Sicot 289i	107 (4)
Sicot 70	107 (9)	Sicala V3i	91 (3)
Sicot 189	100	Sicot 40i	91 (1)
Sicala V2	79 (8)	Sicot 189 RR	69 (2)
Sicala 40	78 (8)	Sicala V2RR	68 (2)
Sicot 72	72 (5)	Sicala V3RRi	47 (4)
Siokra V17	71 (10)	Siokra V16i	12 (2)
Sicala 43	63 (3)	Siokra V16RRi	9 (2)
Siokra V16	19 (6)		

This table is a summary only. Please refer to the individual trial results available on the CSD website.

**TABLE 2: Verticillium resistance rankings for CSIRO varieties**

CONVENTIONAL		TRANSGENIC	
Sicot 80	103 (2)	Sicot 289RRi	124 (1)
Sicot 72	101 (1)	Sicot 289i	106 (1)
Sicala V2	100	Sicot 189 RR	102 (1)
Sicot 189	95 (7)	Sicala V3i	100 (1)
Sicala 40	91 (3)	Siokra V16i	87 (1)
Sicot 70	90 (2)	Sicala V2RR	80 (1)
Sicot 71	87 (1)	Sicala V3RRi	79 (1)
Siokra V17	87 (1)		
Sicala 43	67 (1)		
Siokra V16	58 (2)		
Siokra 1-4	40 (9)		

This table is a summary only. Please refer to the individual trial results available on the CSD website.

net.au. The rankings will be updated with the current season's trial results as soon as they are available. These results will also be forwarded to growers and consultants at that time.

## NEW VARIETIES FOR 2002

The CSIRO Cotton Breeding Team has released seven new varieties for the 2002 planting. Details of all these new varieties can be found on page 64 of this issue.

The new conventional varieties were launched by retiring CSD Directors Frank Hadley and Alan Brimblecombe. Frank and Alan paid tribute to the CSIRO Cotton Breeding Team's efforts and it was fitting that Dr Norm Thomson and his wife Anna were present at the launch with the current breeders Dr Greg Constable, Peter Reid and Dr Warwick Stiller.